

### **REMARKS**

Favorable consideration of this Application as presently amended and in light of the following discussion is respectfully requested. The applicant has amended the specification as requested by the Examiner. Support for newly added claim 18 can be found in the specification at page 7, lines 39 and 50. Support for newly added claims 19 and 20 can be found in example 1. No new matter has been added.

By way of summary, the Official Action presents the following issues: the specification is objected to for allegedly lacking antecedent basis for the claimed subject matter; Claims 1-6, 8, 9, 11-13, 15, and 17 stand rejected under 35 U.S.C. § 102 as being anticipated by W. Gey et al. (U.S. patent No. 3,439,041, hereinafter “Gey”); and, Claims 1-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gey. Claims 1-6, 8-13, 15, and 17 stand rejected under 35 U.S.C. § 102 as being anticipated by Rapoport et al (US 3,957,876 hereinafter “Rapoport”). The applicant respectfully traverses these rejections.

### **REJECTION TO SPECIFICATION**

The outstanding Official Action has rejected the specification for allegedly lacking antecedent basis for the claimed subject matter. The applicant has amended the specification and believes that the specification as amended supplies support for the claims. For the above reasons, this rejection should be withdrawn.

**REJECTION OVER PRIOR ART**

Claims 1-6, 8, 9, 11-13, 15, and 17 were rejected under 35 U.S.C. § 102 as allegedly being anticipated by Gey. Claims 1-17 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Gey. Claims 1-6, 8-13, 15, and 17 were rejected under 35 U.S.C. § 102 as being anticipated by Rapoport.

Gey discloses that the cyclohexane in the liquid phase and is oxidized by means of air (see col. 1, lines 47-50). The oxidant gas is passed into the reactor at three points and incompletely reacted cyclohexane is recirculated.

The applicant believes from the description of the process that oxidation in the reactor is carried out under boiling conditions. Cyclohexane accumulating in the exit gas condenser is added back to the upper section of the reactor. The liquid phase and the gas phase are conveyed in countercurrent flow.

Rapoport discloses that the cyclohexane in the liquid phase (fluid product) and is oxidized by means of an oxidizing gas (gas containing molecular oxygen) is passed upwardly through the zones (see col. 2, lines 14- 26). Rapoport further requires that the catalyst must contain cobalt. The cyclohexane containing the cobalt catalyst is first passed through a series of zones of oxygen cleanup where the cyclohexane is contacted and reacted with the gas that has been previously reacted with cyclohexane in the oxidation zone (see col. 3, lines 1-15). After passing through the oxygen cleanup zones, the cyclohexane passes into a series of oxidizing zones (see col. 3, lines 19-20).

One difference in the present process is the requirement of maintaining the reaction mixture in the boiling state in the reaction zone. This is preferably done in the

presence of a bottom evaporator by means of which the reaction mixture in the entire column is not only kept at boiling point but also a large volume of vapor is deliberately produced. This has the advantage that the useful products in the lower section of the column have their concentration increased. Furthermore, due to the higher volumes of cyclohexane added at the top of the column the concentration of useful product in the reaction zone is reduced and as a result selectivity in favor of the useful product is simultaneously increased. External heat input of this kind is not provided in the processes described in Gey and Rapoport. This is not taught nor suggested by Gey or Rapoport. A notable dilution effect due to condensed cyclohexane and a high content of useful product in the material discharged from the reactor is not to be expected by this means. For the above reasons, these rejections should be withdrawn.

A two month extension fee has been paid. Applicant believes no additional fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 12810-00027-US from which the undersigned is authorized to draw.

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present Application, including Claims 1-20, is patently distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Ashley I. Pezzner". The signature is fluid and cursive, with the first name "Ashley" and last name "Pezner" clearly distinguishable.

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